

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work DRILL	5. Lease Number NMSF-078135
1b. Type of Well GAS	Unit Reporting Number
2. Operator BURLINGTON RESOURCES Oil & Gas Company	6. If Indian, All. or Tribe
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700	7. Unit Agreement Name Huerfanito Unit
4. Location of Well Unit E (SWNW), 1640' FNL, 1140' FWL Latitude 36° 31.2012'N Longitude 107° 46.8299'W	8. Farm or Lease Name
	9. Well Number #103E
	10. Field, Pool, Wildcat Basin Dakota
	11. Sec., Twn, Rge, Mer. (NMPM) Sec. 3, T26N, R9W API # 30-045-33896
14. Distance in Miles from Nearest Town 25.4 miles to Bloomfield, NM	12. County San Juan
	13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 1140'	
16. Acres in Lease	17. Acres Assigned to Well 320.89 W2
18. Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease 53'- Huerfanito Unit #20-3	
19. Proposed Depth 6751'	20. Rotary or Cable Tools Rotary
21. Elevations (DF, FT, GR, Etc.) 6416' GL	22. Approx. Date Work will Start
23. Proposed Casing and Cementing Program See Operations Plan attached	
24. Authorized by: <u>Armando Sanchez</u> Regulatory Analyst	Date <u>8-15-06</u>

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

DATE

Archaeological Report attached

Threatened and Endangered Species Report attached

NOTE: This format is issued in lieu of U.S. BLM Form 3160-3

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or presentations as to any matter within its jurisdiction.

NMOCB

DISTRICT I
1625 N. French Dr., Hobbs, N.M. 88240

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised October 12, 2005

DISTRICT II
1301 West Grand Avenue, Artesia, N.M. 88210

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number 30-045-338910		2 Pool Code 71599		3 Pool Name Basin Dakota	
4 Property Code 7138		5 Property Name HUERFANITO UNIT			6 Well Number 103E
7 OGRID No. 14538		8 Operator Name BURLINGTON RESOURCES OIL AND GAS COMPANY LP			9 Elevation 6416'

10 Surface Location

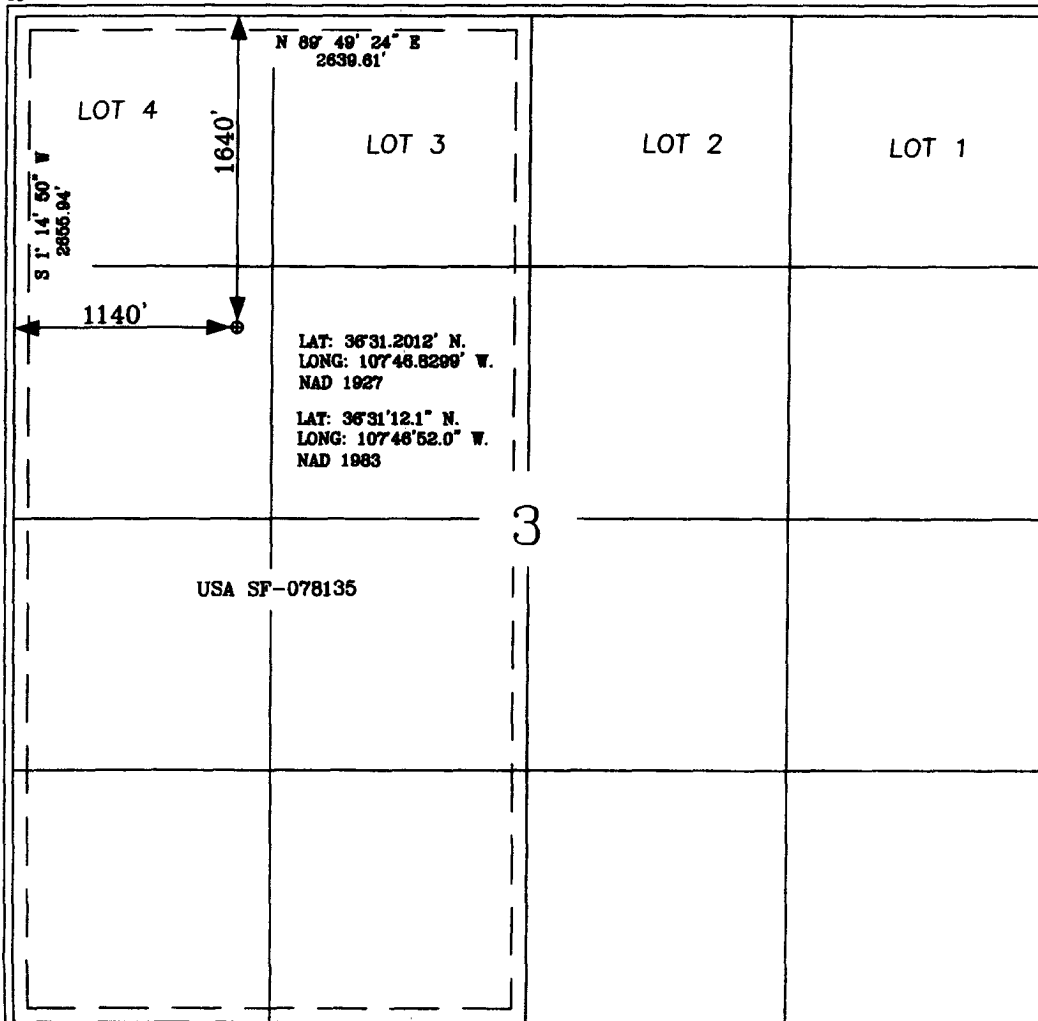
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	3	26-N	9-W		1640'	NORTH	1140'	WEST	SAN JUAN

11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
12 Dedicated Acres W/2 320.89 ac.			13 Joint or Infill		14 Consolidation Code		15 Order No.		

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION


16



17

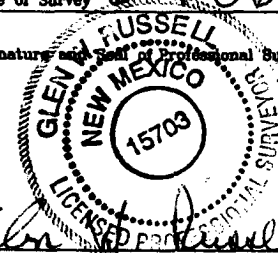
OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or a working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.


Signature
Joni Clark
Printed Name

18 SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Date of Survey 6-1-06
Signature of Professional Surveyor:

Certificate Number 15703

Office

District I

1625 N. French Dr., Hobbs, NM 88240

District II

1301 W. Grand Ave., Artesia, NM 88210

District III

1000 Rio Brazos Rd., Aztec, NM 87410

District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico

Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, NM 87505

Form C-103

May 27, 2004

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)		WELL API NO. 30-045- 33896
1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other		5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input type="checkbox"/>
2. Name of Operator BURLINGTON RESOURCES OIL & GAS COMPANY LP		6. State Oil & Gas Lease No.
3. Address of Operator 3401 E. 30TH STREET, FARMINGTON, NM 87402		7. Lease Name or Unit Agreement Name Huerfanito Unit
4. Well Location Unit Letter <u>E</u> : <u>1640'</u> feet from the <u>North</u> line and <u>1140'</u> feet from the <u>West</u> line Section <u>3</u> Township <u>26N</u> Range <u>9W</u> NMPM County <u>San Juan</u>		8. Well Number #103E
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 6416'		9. OGRID Number 14538
Pit or Below-grade Tank Application <input type="checkbox"/> or Closure <input type="checkbox"/>		10. Pool name or Wildcat Basin Dakota
Pit type <u>New Drill</u> Depth to Groundwater <u>>100'</u> Distance from nearest fresh water well <u>>1000'</u> Distance from nearest surface water <u><1000'</u>		
Pit Liner Thickness: <u>12</u> mil Below-Grade Tank: Volume <u> </u> bbls; Construction Material <u> </u>		

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
 TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
 PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐

OTHER: New Drill ☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
 COMMENCE DRILLING OPNS. ☐ P AND A ☐
 CASING/CEMENT JOB ☐

OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

New Drill, Lined:

Burlington Resources proposes to construct a new drilling pit and an associated vent/flare pit. Based on Burlington's interpretation of the Ecosphere's risk ranking criteria, the new drilling pit will be a lined pit as detailed in Burlington's Revised Drilling / Workover Pit Construction / Operation Procedures dated November 11, 2004 on file at the NMOCD office. A portion of the vent/flare pit will be designed to manage fluids and that portion will be lined as per the risk ranking criteria. Burlington Resources anticipates closing these pits according to the Drilling / Workover Pit Closure Procedure dated August 2, 2004 on file at the NMOCD office

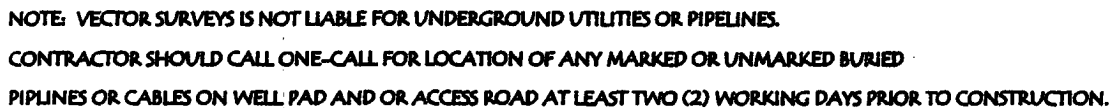
I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☒ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Joni Clark TITLE Regulatory Analyst DATE 6/26/2006

Type or print name Joni Clark E-mail address: jclark@br-inc.com Telephone No. 505-326-9701
For State Use Only

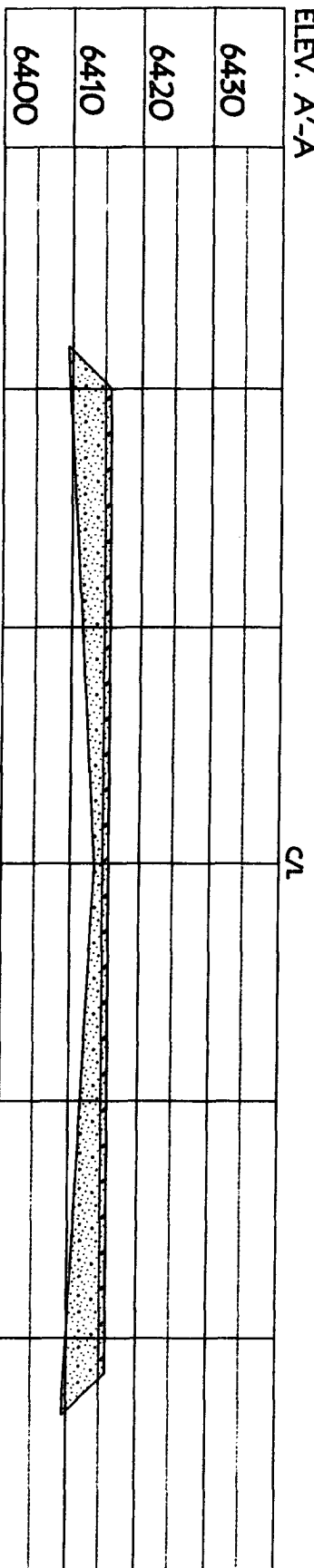
APPROVED BY [Signature] TITLE DEPUTY OIL & GAS INSPECTOR, DIST. 3 DATE AUG 28 2006
 Conditions of Approval (if any):

**RESERVE PIT DIKE: TO BE 8' ABOVE DEEP SIDE (OVERFLOW - 3' WIDE AND 1' ABOVE SHALLOW SIDE).
BLOW PIT: OVERFLOW PIPE 4' ABOVE BOTTOM OF BLOW PIT.**

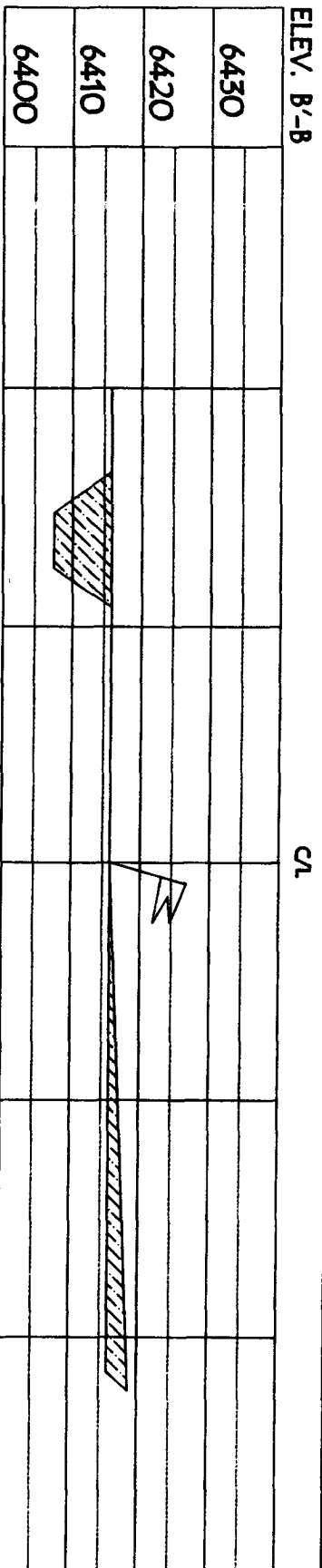


BURLINGTON RESOURCES OIL & GAS COMPANY LP
 HUERFANITO UNIT03E, 1640' FNL & 1140' FWL
 SECTION 3, T-26- N, R-9-W, NMPM, SAN JUAN COUNTY, NM
 GROUND ELEVATION: 6416', DATE: MAY 22, 2006

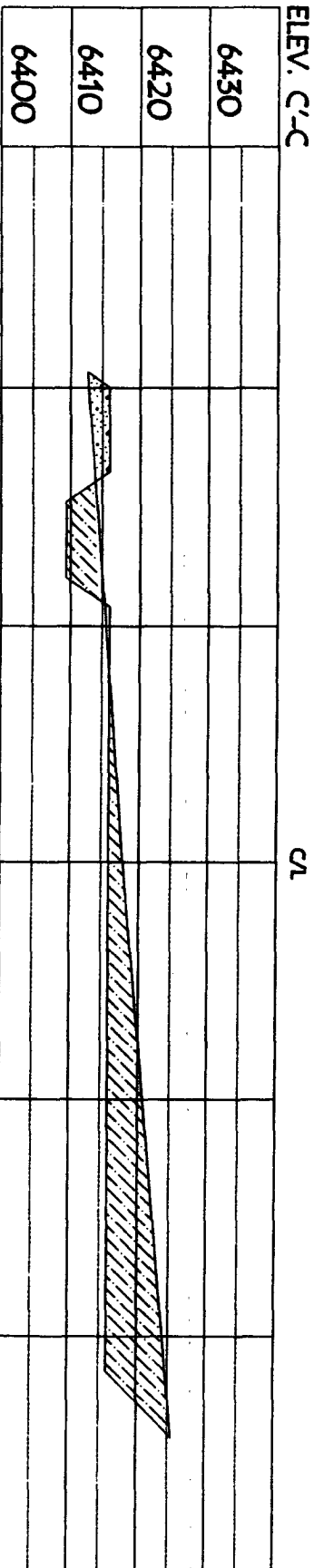
ELEV. A'-A



ELEV. B'-B



ELEV. C'-C



NOTE: VECTOR SURVEYS IS NOT LIABLE FOR UNDERGROUND UTILITIES OR PIPELINES.
 CONTRACTOR SHOULD CALL ONE-CALL FOR LOCATION OF ANY MARKED OR UNMARKED BURIED
 PIPELINES OR CABLES ON WELL PAD AND OR ACCESS ROAD AT LEAST TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION.

OPERATIONS PLAN

Well Name: Huerfanito Unit #103E
Location: 1640' FNL, 1140' FWL, Section 3, T-26-N, R-09-W
San Juan County, New Mexico
Latitude 36° 31.2012', Longitude 107° 46.8299'
Formation: Basin Dakota
Elevation: 6416' GL

<u>Formation Tops:</u>	<u>Top</u>	<u>Bottom</u>	<u>Contents</u>
Surface	San Jose	1349'	
Ojo Alamo	1349'	1422'	aquifer
Kirtland	1422'	1999'	gas
Fruitland	1999'	2162'	
Pictured Cliffs	2162'	2271'	gas
Lewis	2271'	2605'	gas
Huerfanito Bentonite	2605'	3058'	gas
Chacra	3058'	3728'	gas
Cliff House	3728'	3813'	
Menefee	3813'	4503'	gas
Point Lookout	4503'	4816'	gas
Mancos	4816'	5629'	gas
Gallup	5629'	6454'	gas
Greenhorn	6454'	6505'	gas
Graneros	6505'	6531'	gas
Two Wells	6531'	6623'	
Paguate	6623'	6683'	
Cubero	6683'	6689'	
Encinal	6689'	6751'	gas
TD	6751'		

Logging Program:

Mud Logs/Coring/DST -
Mud logs - none
Coring - none
DST - none
Open hole - none
Cased hole - Gamma Ray - surface to TD

Mud Program:

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Vis.</u>	<u>Fluid Loss</u>
0- 300'	Spud MUD/Air/Air Mist	8.4-9.0	40-50	no control
300'- 6751'	LSND	8.4-9.0	30-60	no control

Casing Program (as listed, the equivalent, or better):

<u>Hole Size</u>	<u>Depth Interval</u>	<u>Csg. Size</u>	<u>Wt.</u>	<u>Grade</u>
12 1/4"	0' - 300'	8 5/8"	24.0#	J-55
7 7/8"	0' - 6751'	4 1/2"	10.5#	J-55

Tubing Program: 0' - 6751' 2 3/8" 4.7# J-55

BOP Specifications, Wellhead and Tests:

Surface to Intermediate TD -

11" 2000 psi minimum double gate BOP stack (Reference Figure #1). After nipple-up prior to drilling out surface casing, ~~rams~~ ^{BOP} and casing will be tested to 600 psi for 30 minutes.

Intermediate TD to Total Depth -

11" 2000 psi minimum double gate BOP stack (Reference Figure #1). After nipple-up prior to drilling out intermediate casing, rams and casing will be tested to 1500 psi for 30 minutes.

Surface to Total Depth -

2" nominal, 2000 psi minimum choke manifold (Reference Figure #3).

Completion Operations -

7 1/16" 2000 psi double gate BOP stack (Reference Figure #2). After nipple-up prior to completion, pipe rams, casing and liner top will be tested to 2000 psi for 15 minutes.

Wellhead -

8 5/8" x 4 1/2" x 2 3/8" x 2000 psi tree assembly.

General -

- Pipe rams will be actuated once each day and blind rams will be actuated once each trip to test proper functioning.
- An upper kelly cock valve with handle available and drill string valves to fit each drill string will be available on the rig floors at all times.
- BOP pit level drill will be conducted weekly for each drill crew.
- All BOP tests & drills will be recorded in daily drilling reports.
- Blind and pipe rams will be equipped with extension hand wheels.

Cementing:

8 5/8" surface casing conventionally drilled -

Cement with 321 sacks Type III cement with 0.25 pps Celloflake, 3% calcium chloride. (200% excess, bring cement to surface). Wait on cement appropriate time until cement achieves 250 psi compressive strength at 60 degrees F. prior to nipple up of BOPE. Wait on cement for 8 hrs for conventionally set holes before pressure testing or drilling out from under surface.

Saw tooth guide shoe on bottom. Bowspring centralizers will be run in accordance with Onshore Order #2.

4 1/2" Production Casing Two Stage -

Stage collar set @ 4353'. First Stage: Lead with w/264 sacks Premium Lite HS FM cmt w/0.25 pps celloflake, 0.3% CD-32, 6.25 pps LCM-1 and 1% FL-52. Second Stage: 470 sacks Premium Lite cmt w/3% calcium chloride, 0.4% metasilicate, 0.25 pps celloflake, 5 pps LCM-1 and 0.4% FL-52. (2276 cu ft - 50% excess, circulate to surface, run CBL/temperature survey if cement is not circulated to surface.)

Cement nose guide shoe on bottom with float collar spaced on top of shoe joint. Bowspring centralizers spaced every fourth joint off bottom, to the base of the Ojo Alamo @ 1422'. Two turbolating centralizers at the base of the Ojo Alamo 1422'. Bowspring centralizers spaced every fourth joint from the base of the Ojo Alamo to the base of the surface casing.

Note: If open hole logs are run, cement volumes will be based on 25% excess over caliper volumes.

If hole conditions permit, an adequate water spacer will be pumped ahead of each cement job to prevent cement/ mud contamination or cement hydration.

Special Drilling Operations (Air/Mist Drilling):

The following equipment will be operational while air/mist drilling:

- An anchored blooie line will be utilized to discharge all cuttings and circulating medium to the blow pit a minimum of 100' from the wellhead.
- The blooie line will be equipped with an automatic igniter or pilot light.
- Compressors will be located a minimum of 100' from the wellhead in the opposite direction from the blooie line.
- Engines will have spark arresters or water cooled exhaust.

Special Drilling Operations (Air/Mist Drilling):

- The rotating head will be properly lubricated and maintained.
- A float valve will be utilized above the bit.
- Mud circulating equipment, water, and mud materials will be sufficient to maintain control of the well.

Additional Information:

- The Dakota formation will be completed.
- No abnormal temperatures or hazards are anticipated.
- Anticipated pore pressures are as follows:

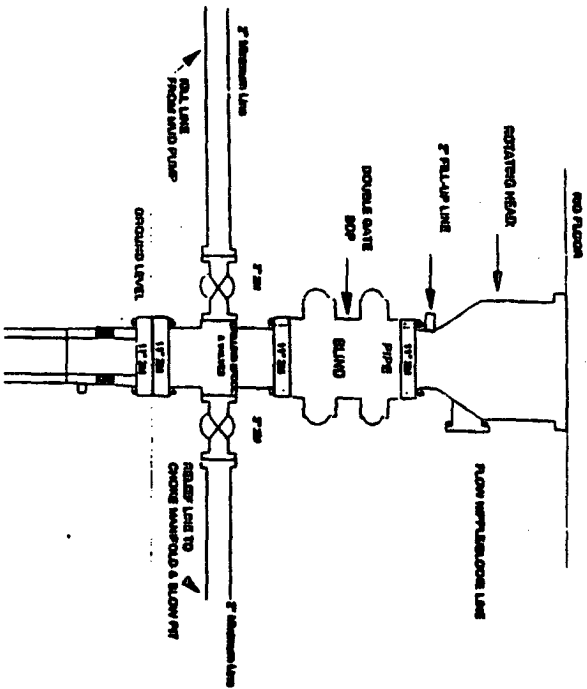
Fruitland Coal	300 psi
Pictured Cliffs	600 psi
Mesa Verde	700 psi
Dakota	2500 psi
- Sufficient LCM will be added to the mud system to maintain well control, if lost circulation is encountered below the top of the Pictured Cliffs.
- The west half of Section 3 is dedicated to the Dakota formation.
- This gas is dedicated.

Drilling Engineer 

Date 7/5/06

Burlington Resources

Drilling Rig 2000 psi System



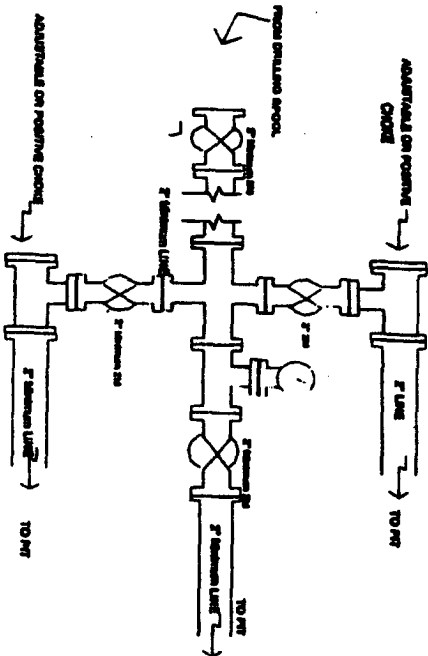
BOP installation from Surface Casing Point to Total Depth. 1 1/2\"/>

Figure #1

4-20-01

BURLINGTON RESOURCES

Drilling Rig Choke Manifold Configuration 2000 psi System



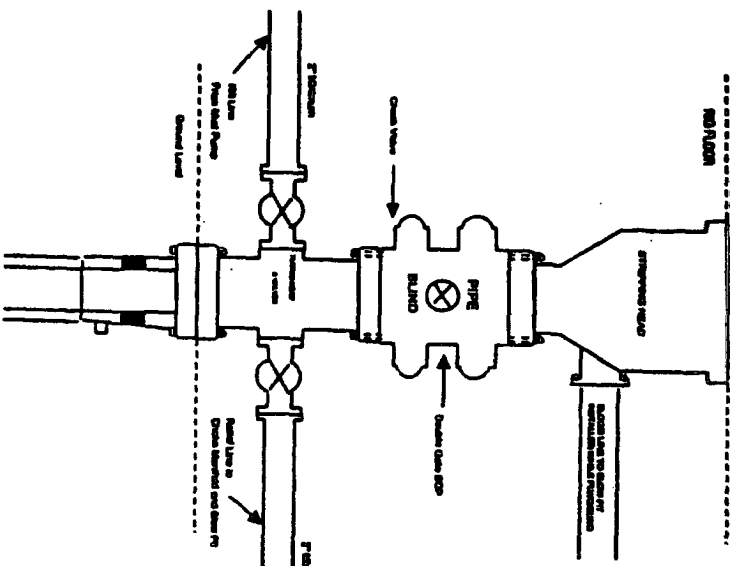
Choke manifold installation from Surface Casing Point to Total Depth. 2,000psi working pressure equipment with two chokes.

Figure #3

4-20-01

BURLINGTON RESOURCES

Completion/Workover Rig BOP Configuration 2,000 psi System



Minimum BOP installation for all Completion/Workover Operations. 7-1/16\"/>

Figure #2